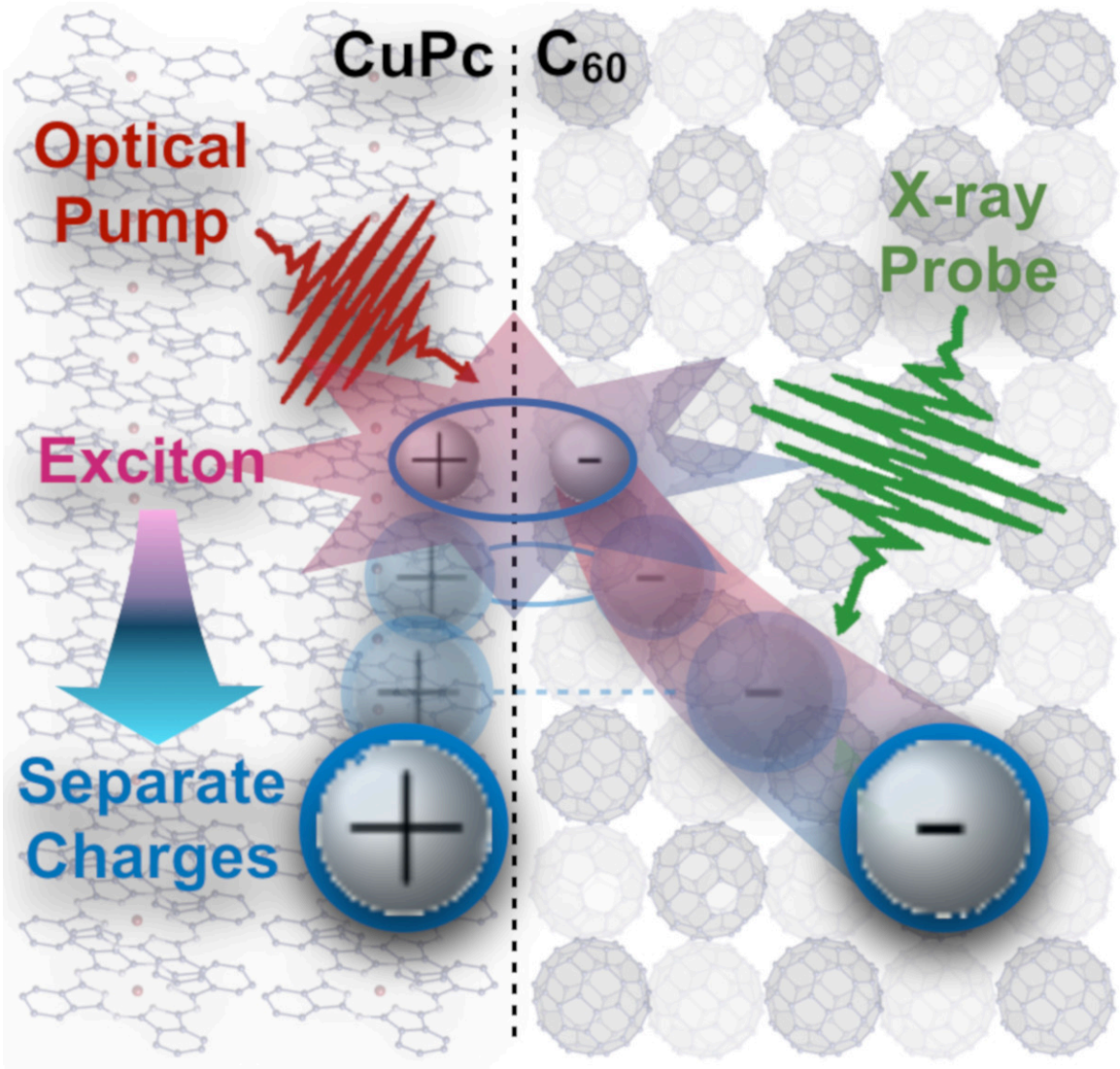
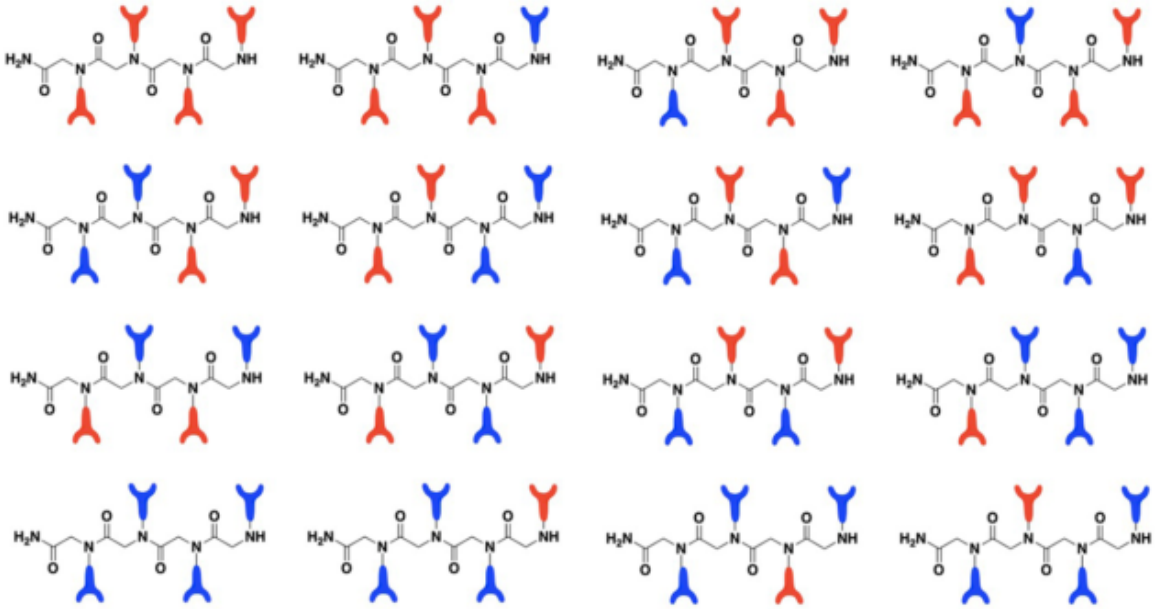
Chemical Sciences Division Home

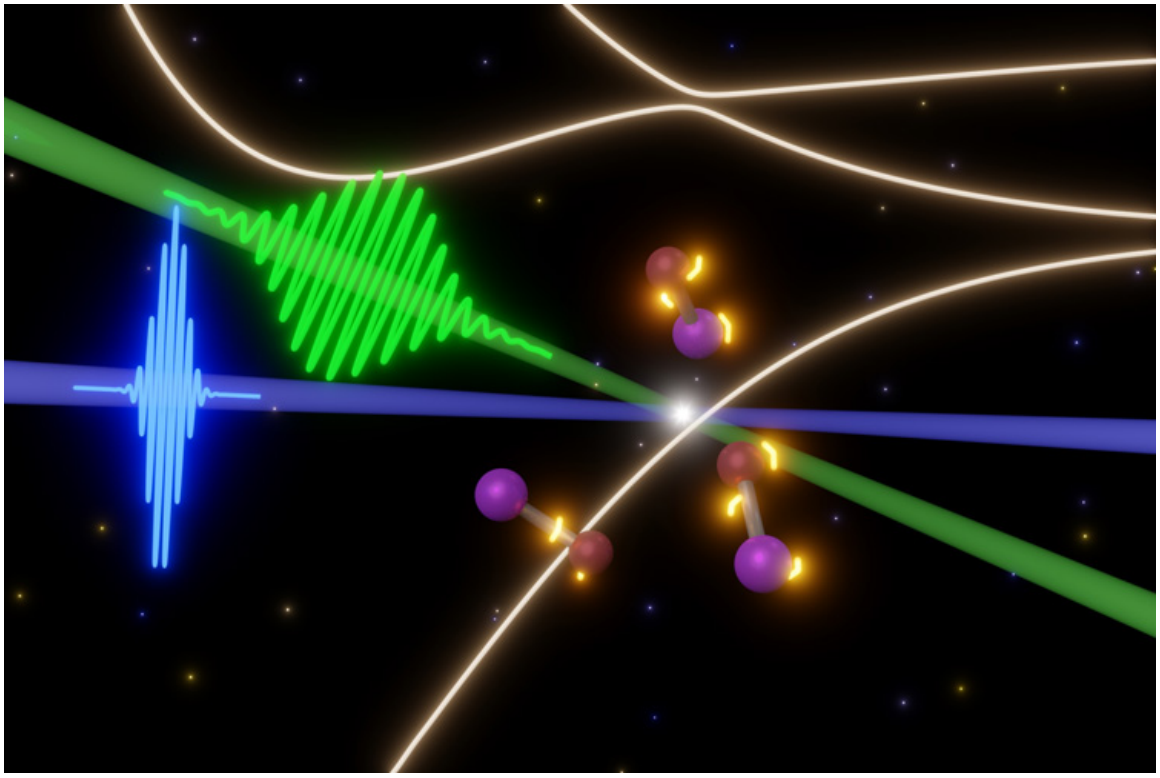
Highlights

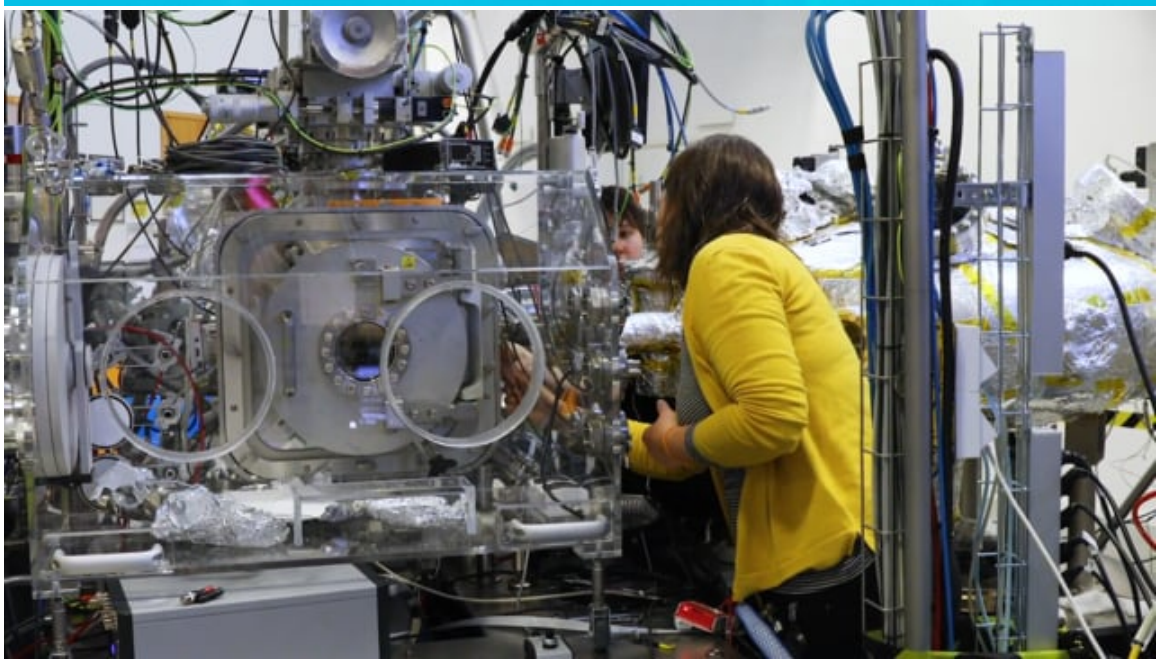

CuPc
C60
Optical Pump
X-ray Probe
Exciton
Separate Charges

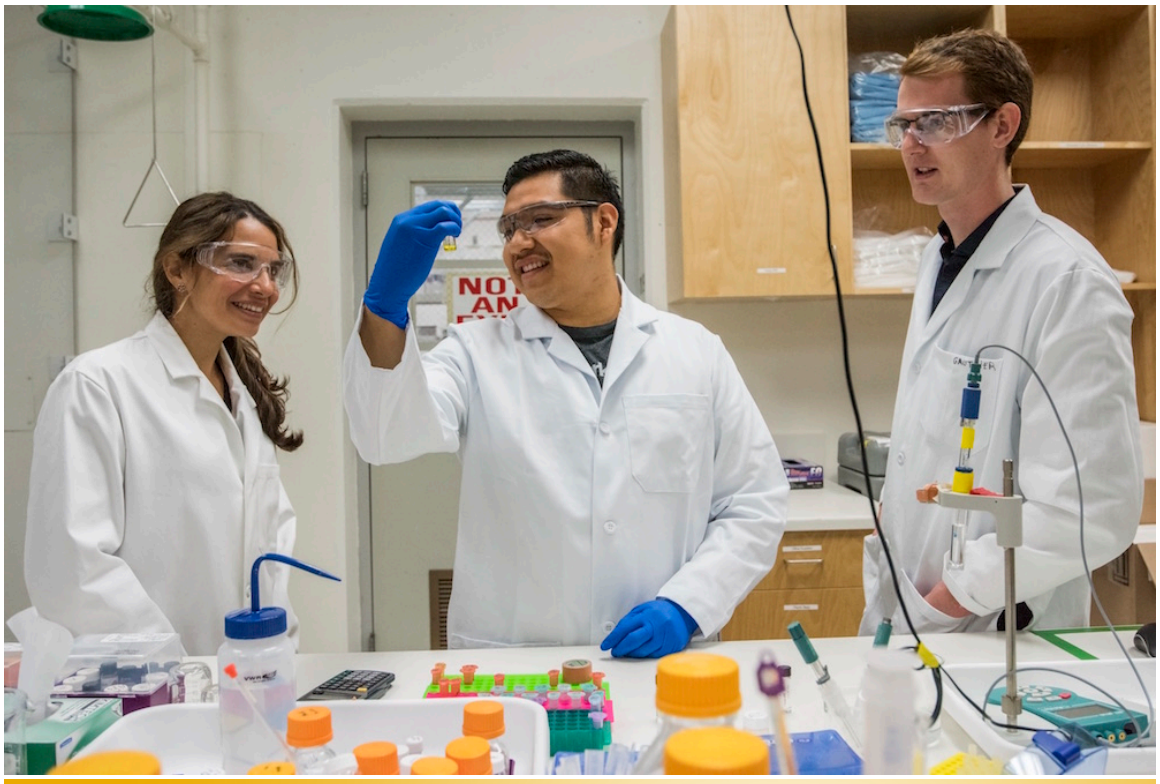

97
Bk
Berkelium
247.07

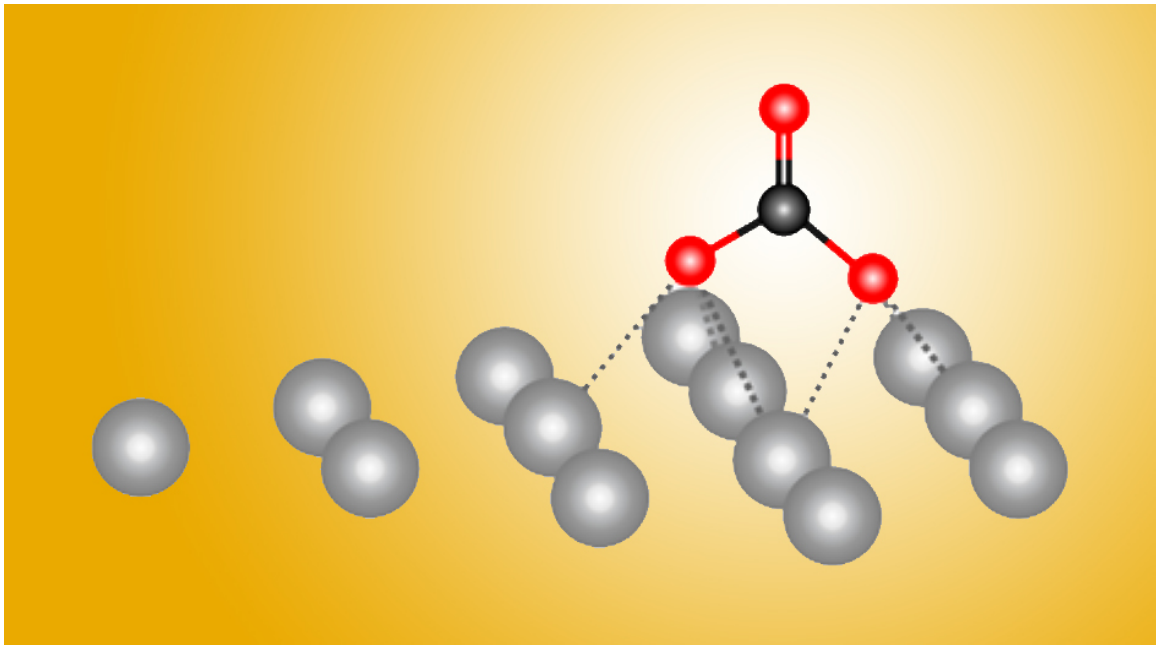

98
Cf
Californium
251.08

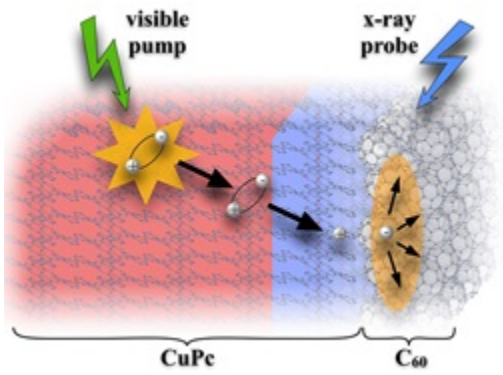


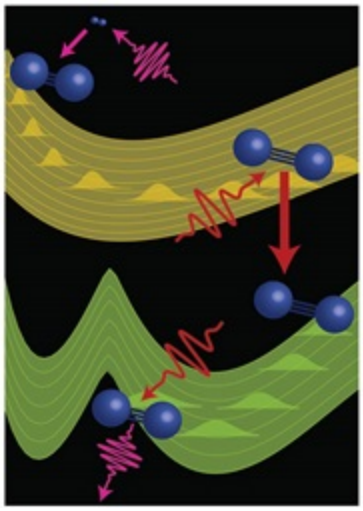


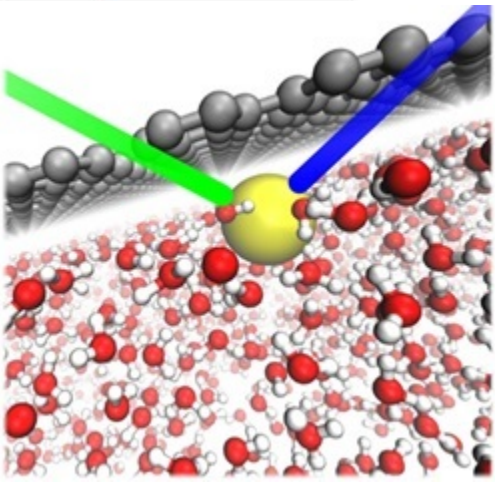


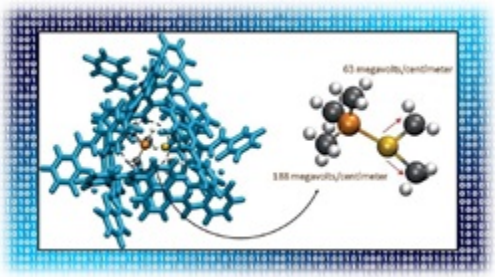


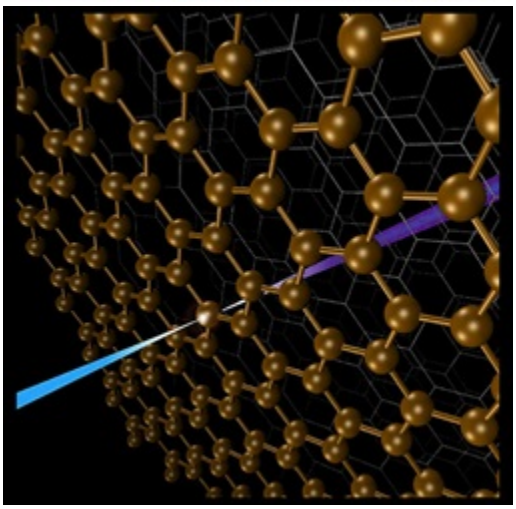


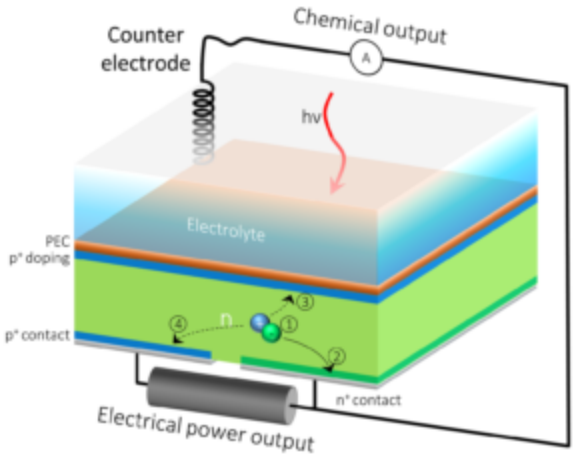

visible
pump
x-ray
probe
CuPc
C60

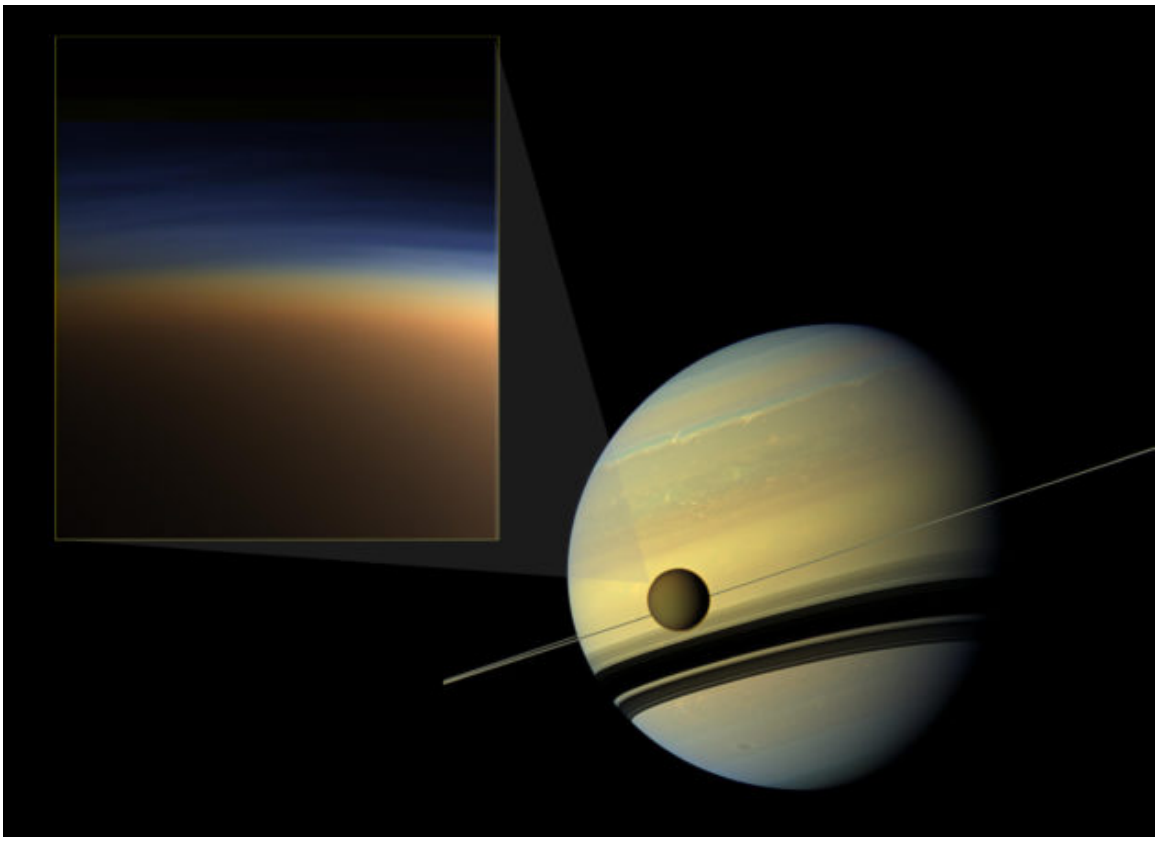


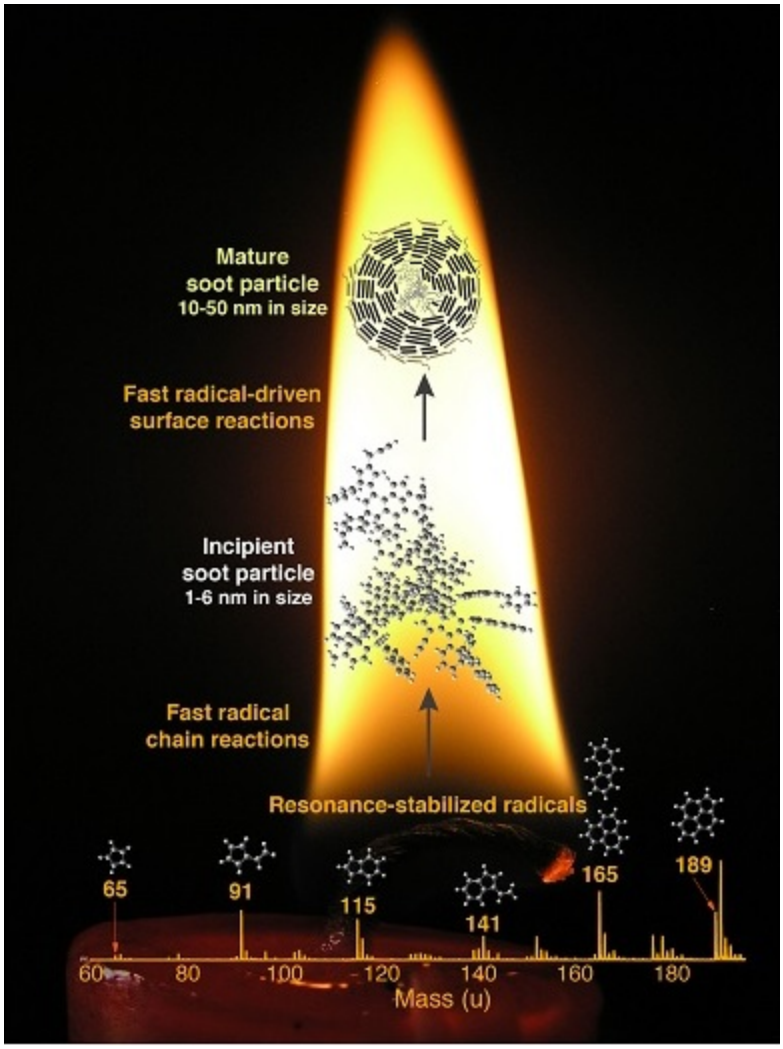


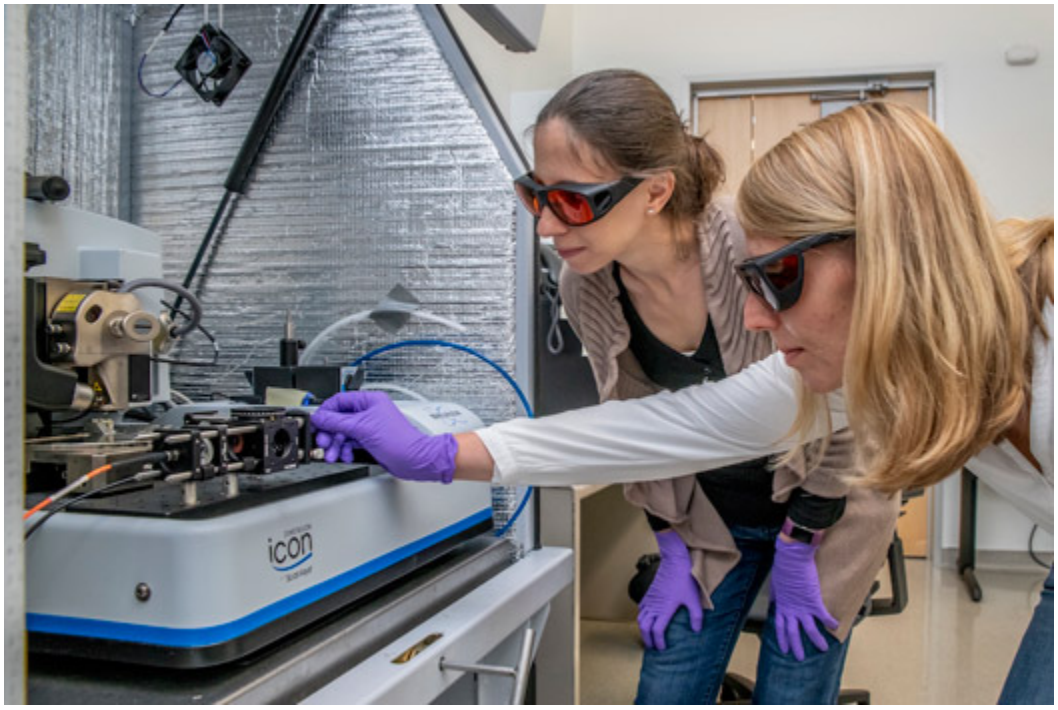

63 megavolts/centimeter
188 megavolts/centimeter

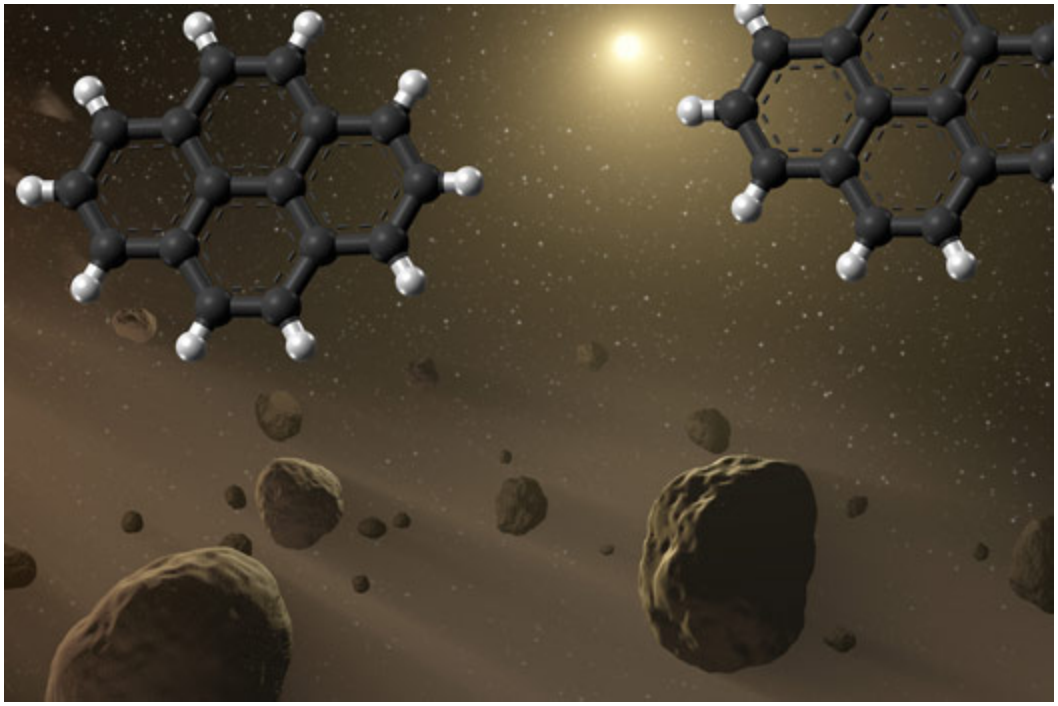


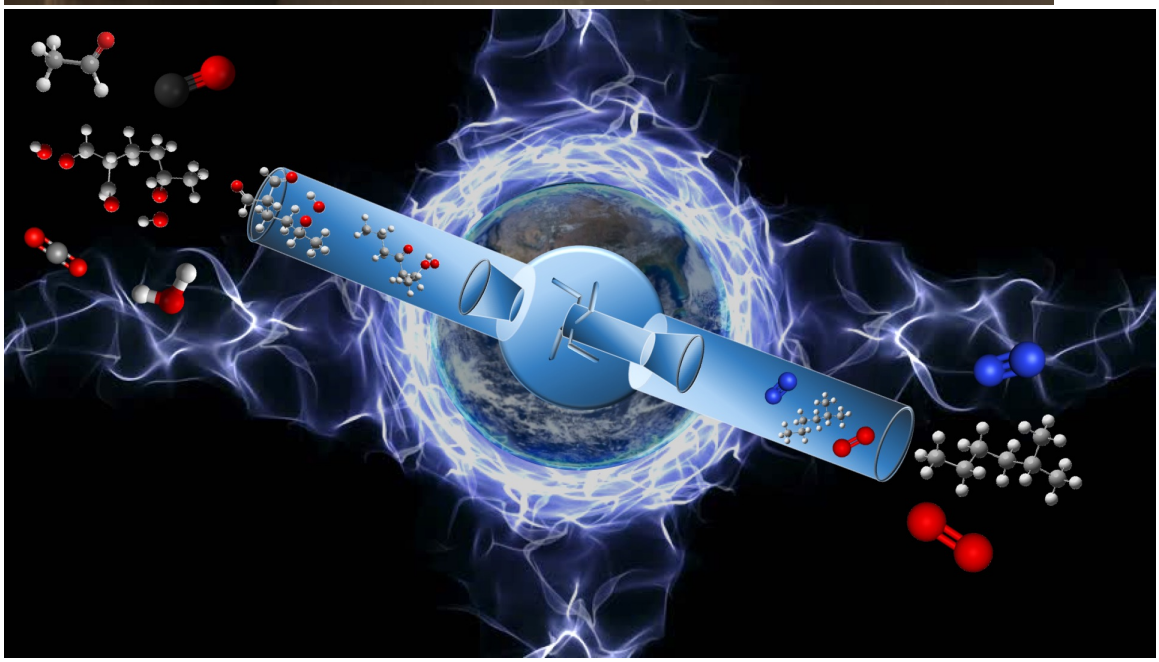

Counter
electrode
Chemical output
A
hv
Electrolyte
PEC
p+ doping
p+ contact
n
1
2
3
4
n+ contact
Electrical power output

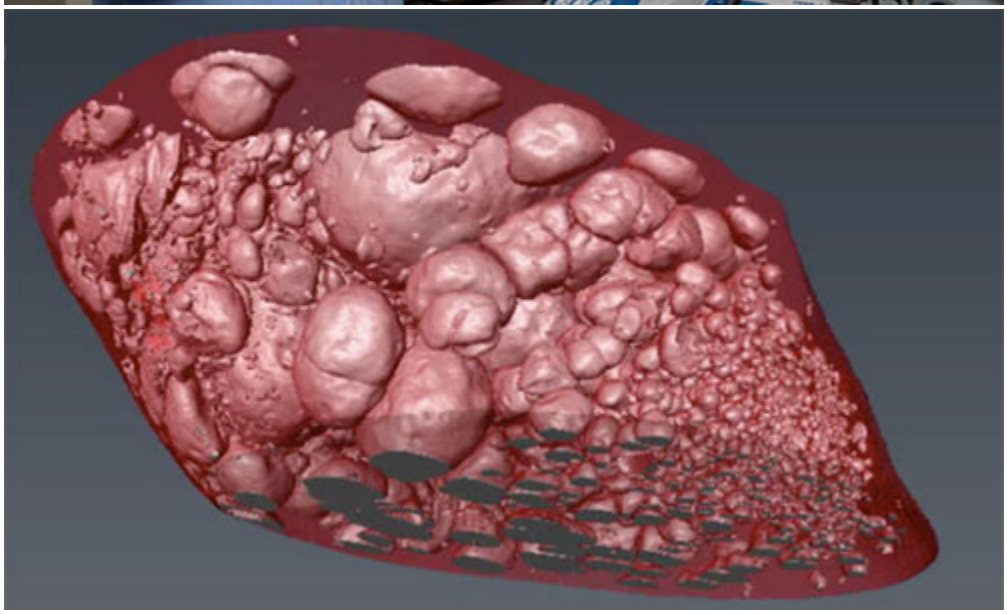



Mature
soot particle
10-50 nm in size
Fast radical-driven
surface reactions
Incipient
soot particle
1-6 nm in size
Fast radical
chain reactions
Resonance-stabilized radicals
65
91
115
141
165
189
60
80
100
120
140
160
180
Mass (u)

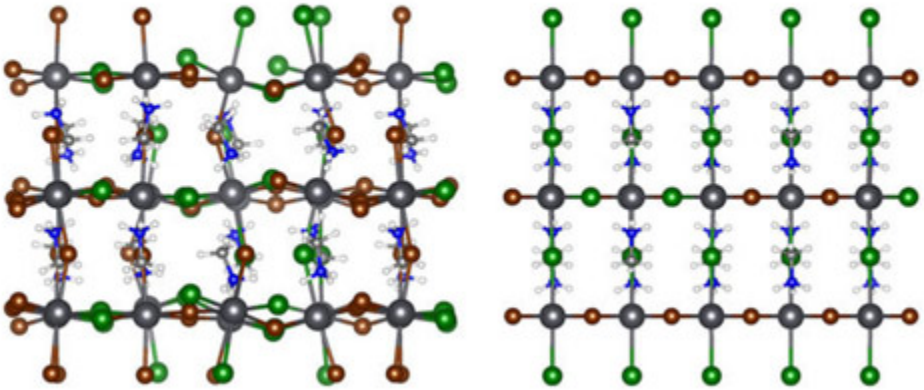

icon

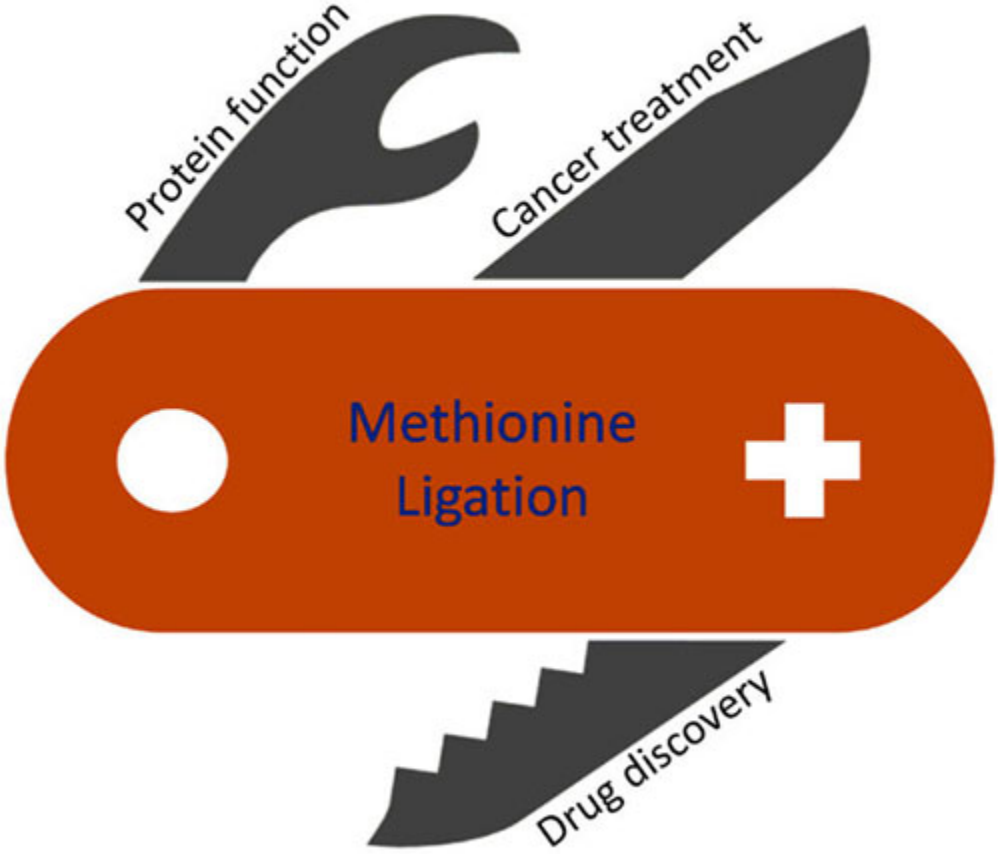


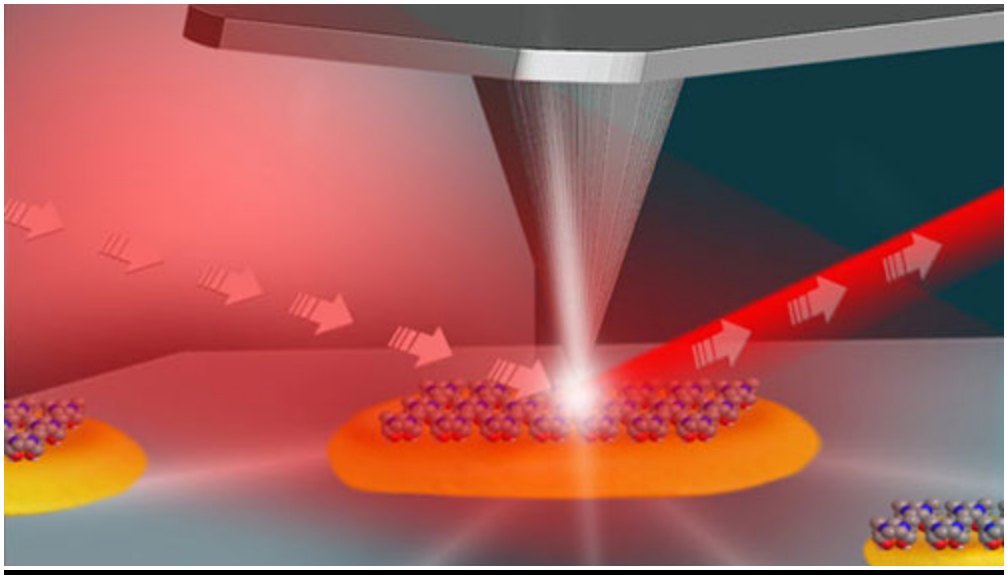


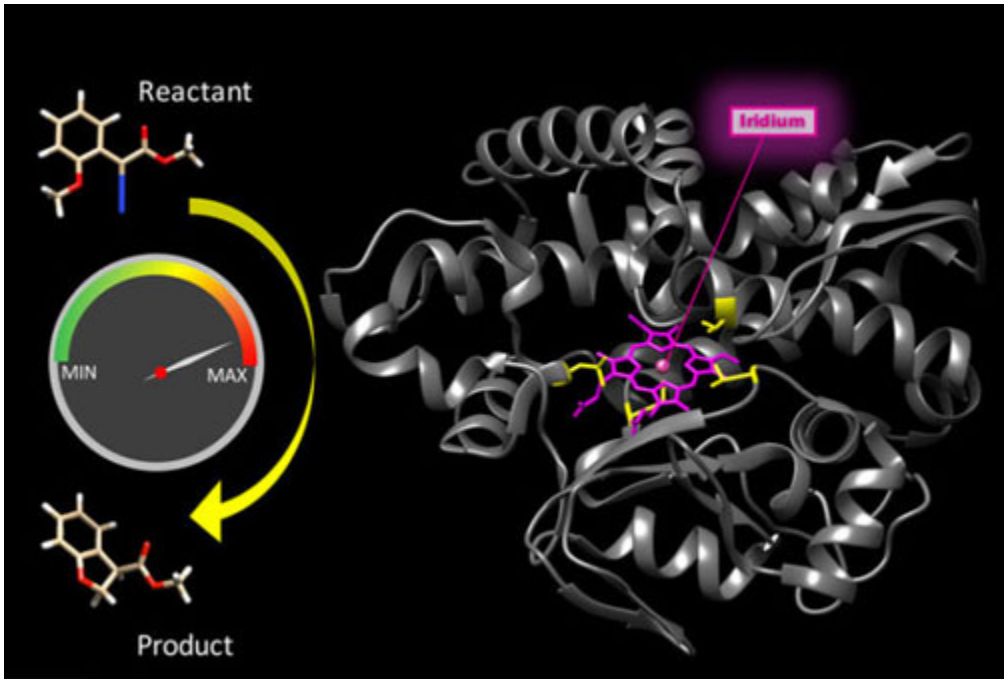


Organo-Lead Halide Perovskite

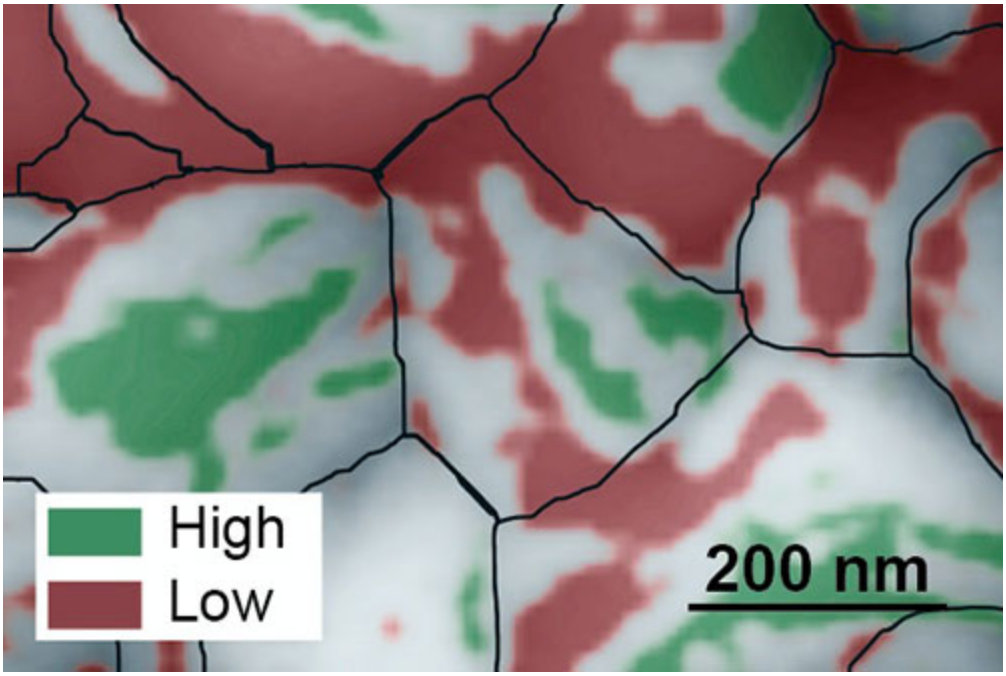


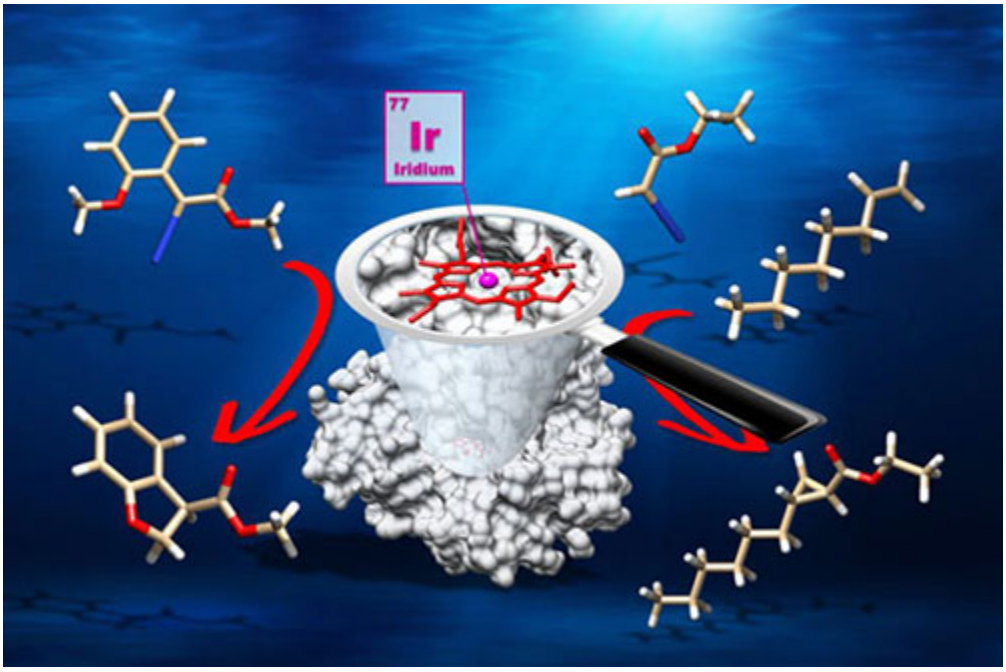


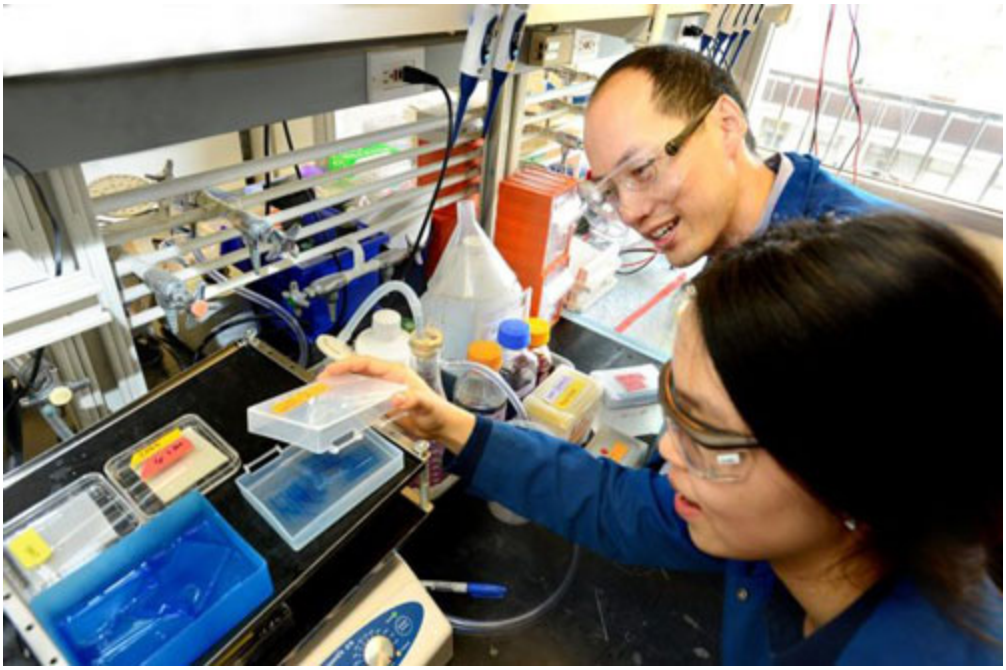


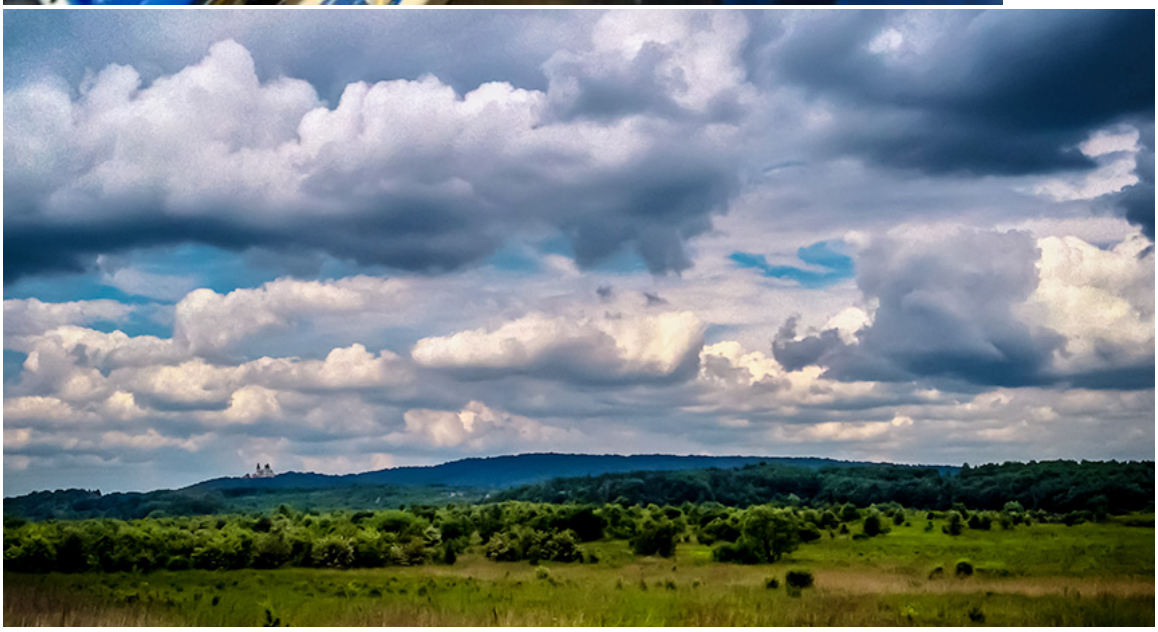

Reactant
Iridium
MIN
MAX
Product

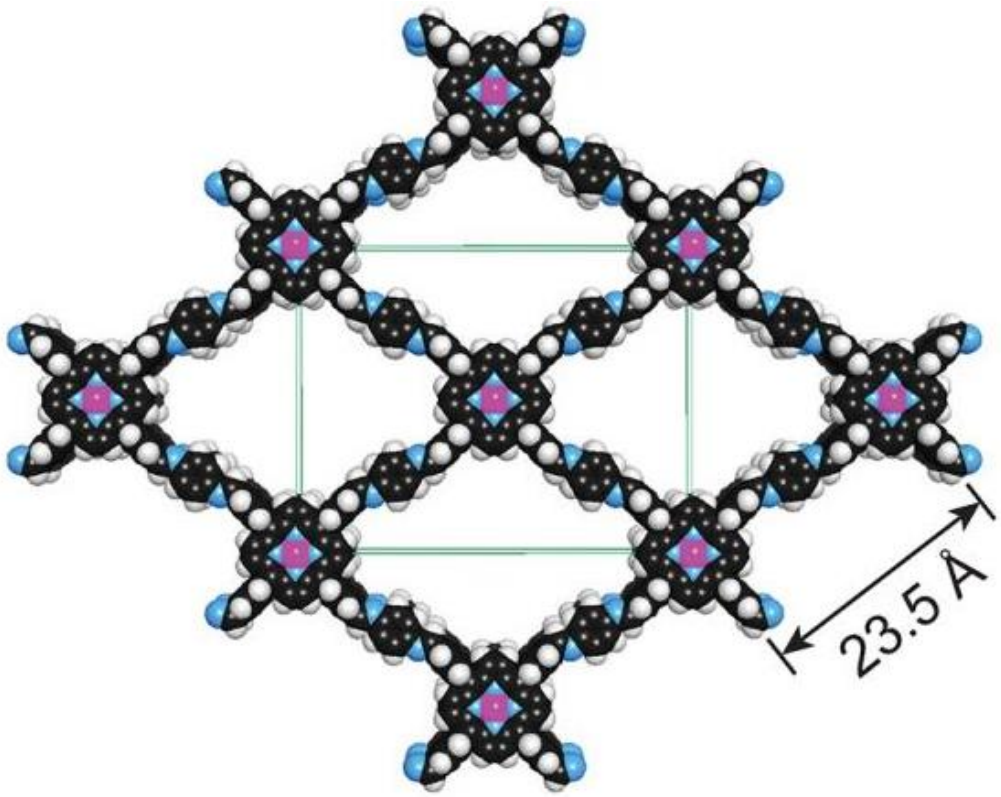

Raindrops Spur Soil-filled Mist


High
Low
200 nm

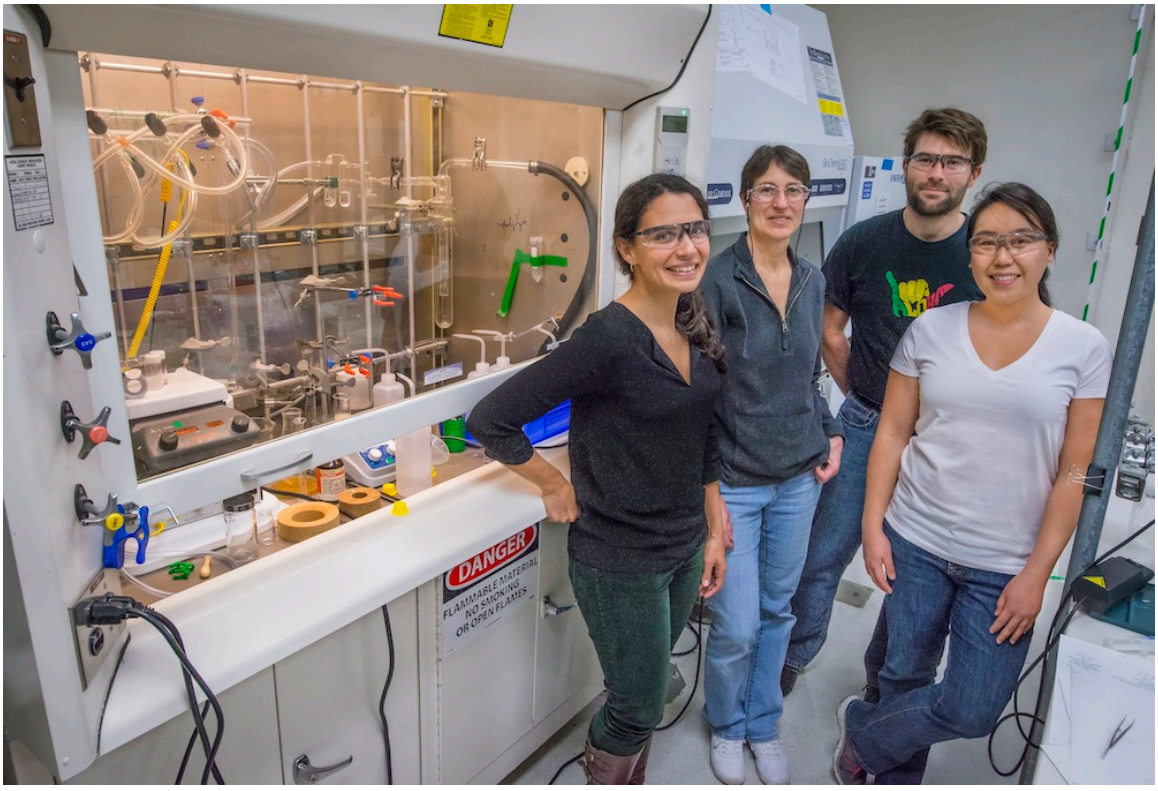

77
Ir
Iridium

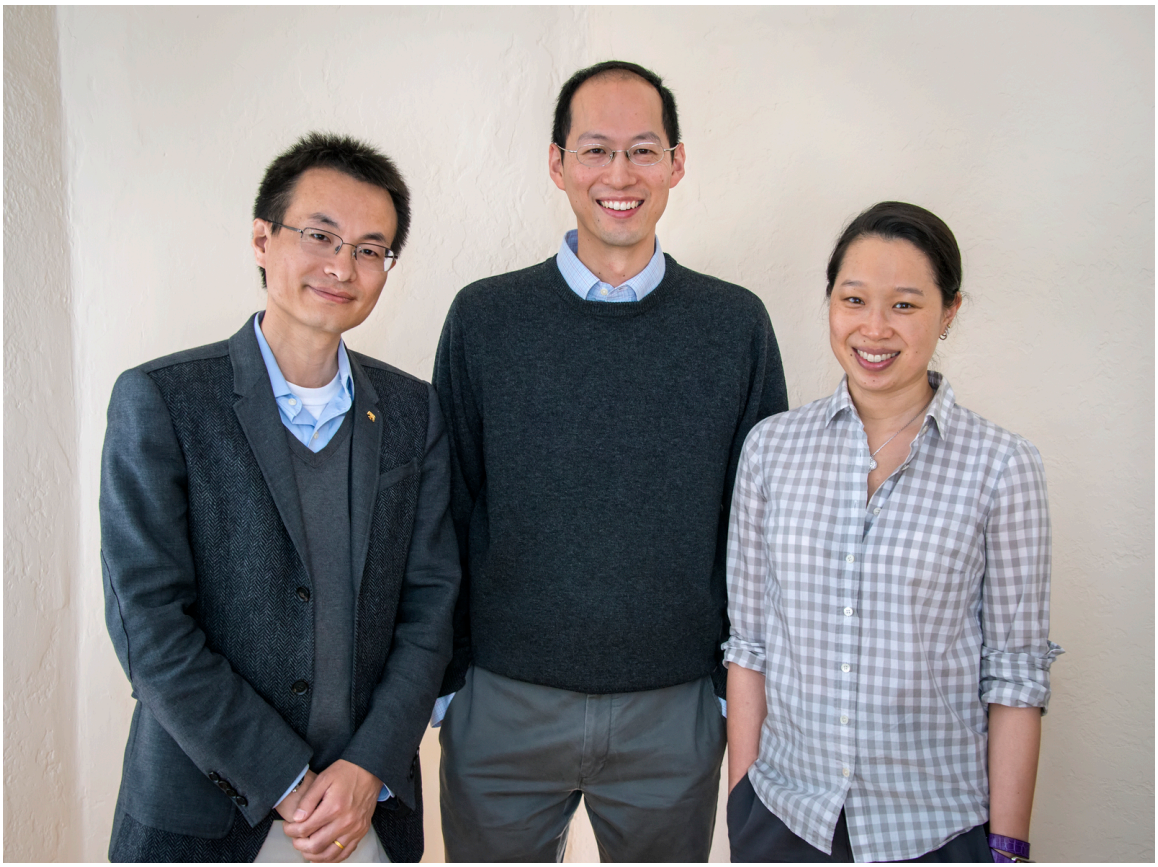




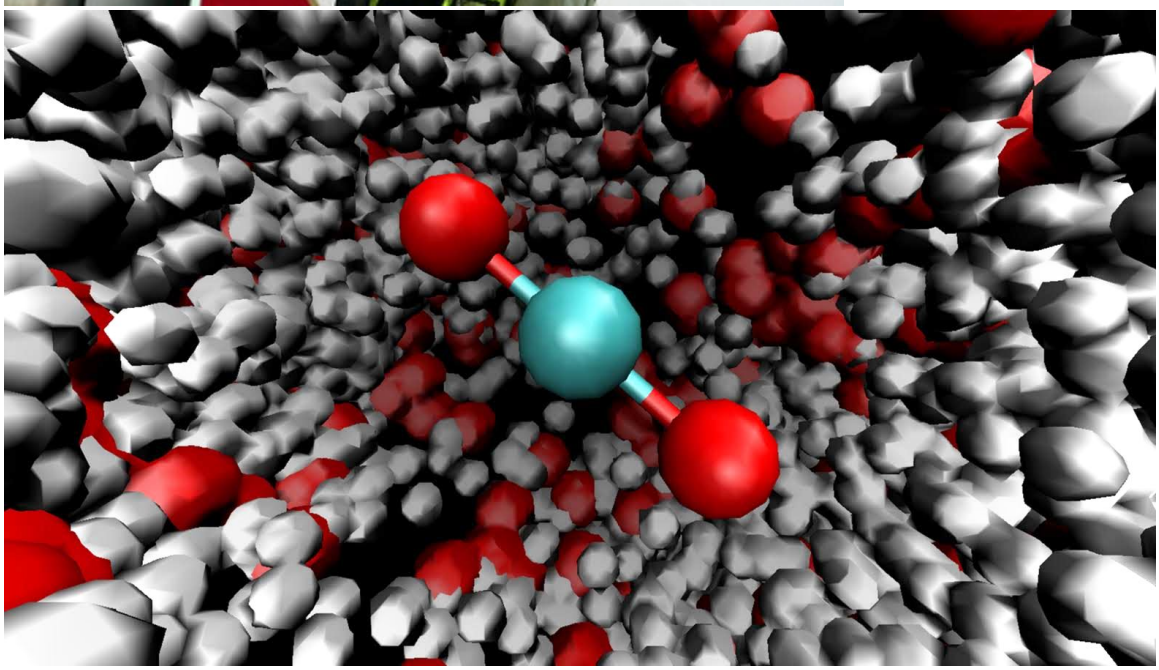


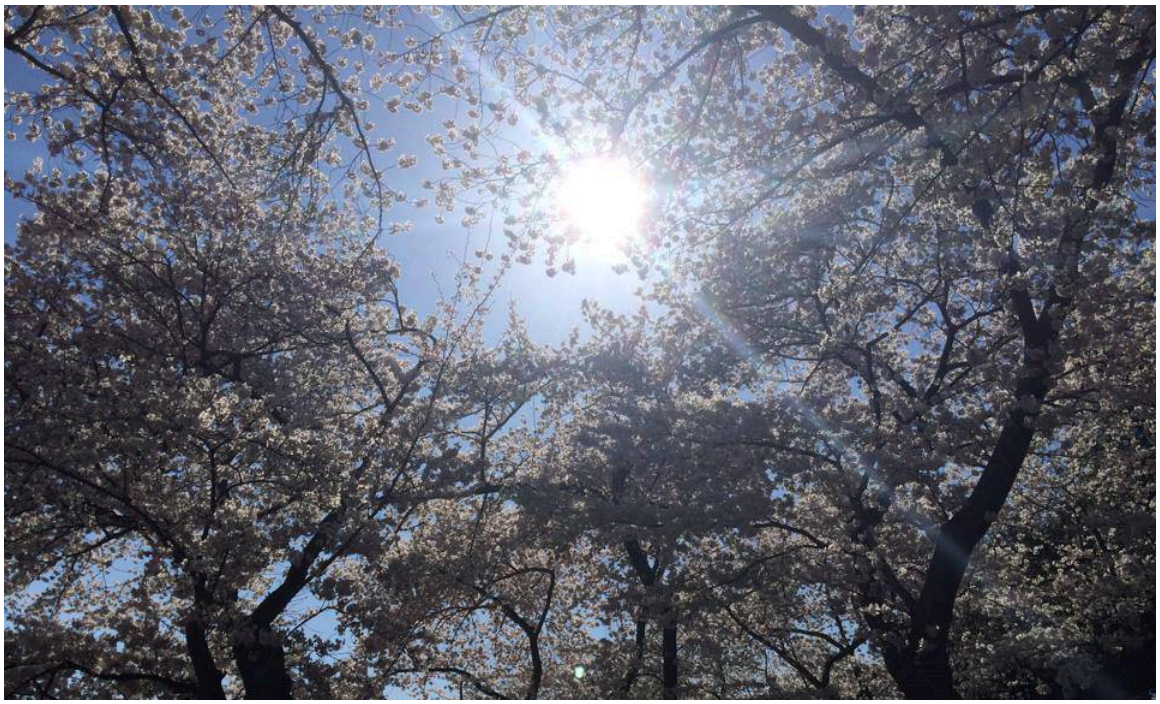
M = Co COF-366-Co

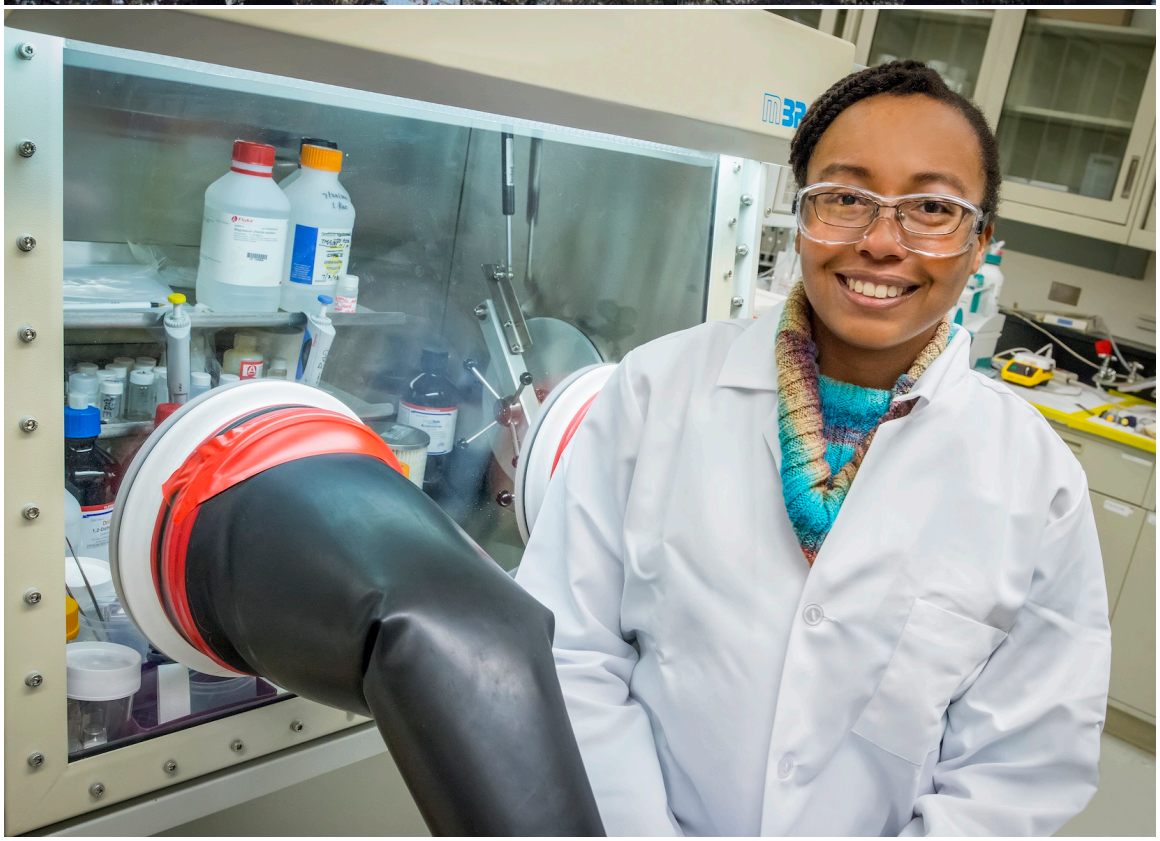


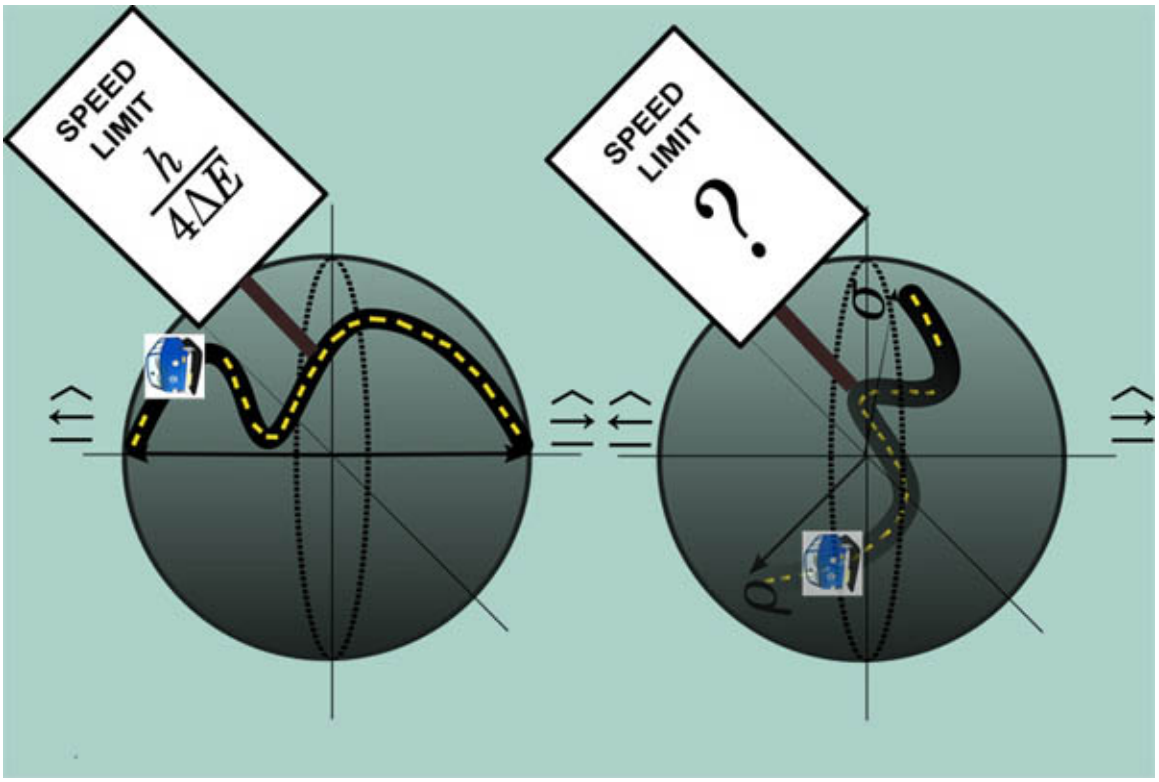


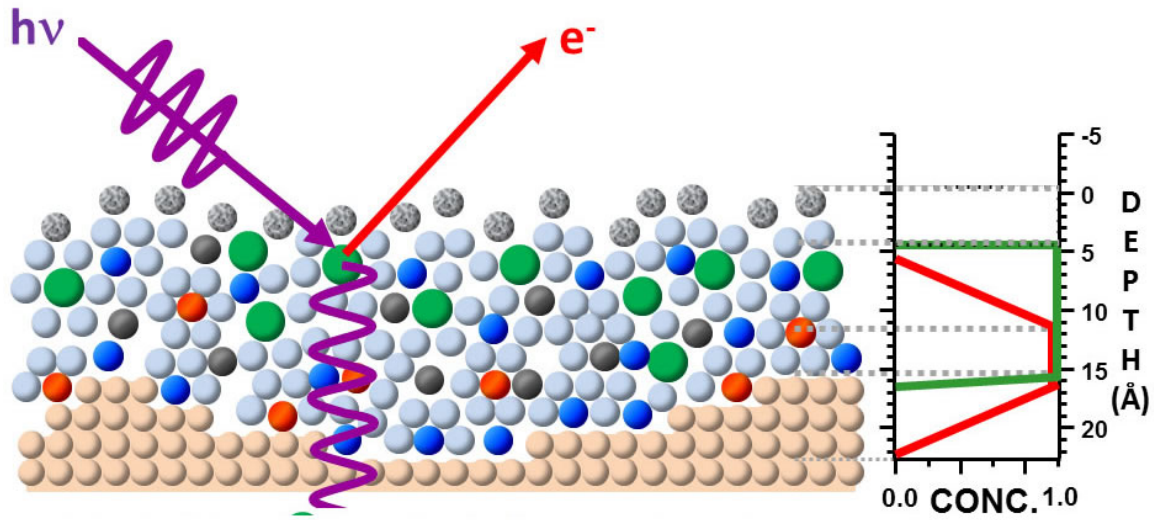

121 MHH








SPEED LIMIT
$\frac{h}{4\Delta E}$
SPEED LIMIT
?


hν
e-
-5
0
5
10
15
20
DEPTH (Å)
0.0
CONC.
1.0


#AskBerkeleyLab: A Pill to Treat Exposure to Ra...


Interview with Professor John Hartwig - Winner ...
00:00 / 12:14
YouTube

Latest News

David Limmer awarded 2021 Alfred P. Sloan Fellowship

Nancy L Muto posted on Feb 19, 2021

David Limmer at UC Berkeley. (Photo: courtesy David Limmer)

The College of Chemistry is pleased to announce that David Limmer, Assistant Chemistry Professor and Chevron Chair in Chemistry, has been awarded a 2021 Fellowship by the Alfred P. Sloan Foundation(link is external). He joins the ranks of 126 early-career scholars in several scientific disciplines from Canada and the United States who have been selected for this year.

Matthew Francis, Chair of the Department of Chemistry said of David's work, "We are very pleased that David has received this significant early career acknowledgement. His current projects address a variety of nanoscale phenomena in systems relevant to basic energy sciences: dissipative chemical dynamics, far-from-equilibrium materials and processes, and nanoscale fluctuations in energy-related materials. His research beautifully combines chemistry, physics and mathematics/computation, leveraging advances in each area to make progress in the theoretical understanding of diverse physical phenomena."

Prof. Limmer's current research program(link is external) develops tools, perspectives and theories that place nonequilibrium chemical physics at the same level of understanding as those of equilibrium ideas, in order to tackle outstanding questions in the physical sciences. His group pioneers theoretical frameworks and invents molecular simulation techniques, applying each to concrete physical systems, often in concert with experimental collaborators. His research is focused on broad themes of unraveling reactive dynamics in complex environments, elucidating transport processes in nanoscale systems, and understanding emergent behavior in driven and biological matter. The research is tied together by the basic theoretical principles that dictate the dynamical behavior of complex systems, like open quantum systems and stochastic thermodynamics.

About the Alfred P. Sloan Fellowship

The Alfred P. Sloan Foundation seeks to stimulate fundamental research by early-career scientists and scholars of outstanding promise with the Alfred P. Sloan Fellowship program. These two-year fellowships are awarded annually to 126 researchers in recognition of distinguished performance and a unique potential to make substantial contributions to their field.

Alfred P. Sloan was elected Chairman of the Board of General Motors in 1937. When he resigned his chairmanship in 1956, he was named Honorary Chairman of the Board, a title he retained until his death in 1966. During the

later years of his life, Sloan devoted the largest share of his time and energy to philanthropic activities, both as a private donor to many causes and organizations and through the Alfred P. Sloan Foundation, which he established in 1934.

- news

Guosong Zeng recognized by DOE Hydrogen and Fuel Cell Technologies Office

Eric Rett posted on Oct 07, 2020

The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) announced the recipients of EERE's Hydrogen and Fuel Cell Technologies Office's (HFTO's) inaugural Postdoctoral Recognition Award. The award recognizes postdoctoral fellows from DOE National Laboratories for outstanding contributions in identifying research solutions to hydrogen and fuel cell research challenges.

Recognized postdoctoral fellow runner up Guosong Zeng from the Lawrence Berkeley National Laboratory for research contributions to advance light-activated semiconductor cathodes to produce hydrogen via photoelectrochemical water splitting.

Please visit the U.S. Department of Energy Office of Energy Efficiency & Renewable Energy for the full press release. https://content.govdelivery.com/accounts/USEERE/bulletins/2a49197

- news

John Hartwig recieves the Arthur C. Cope Award

Eric Rett posted on Sep 02, 2020

The American Chemical Society has granted the Arthur C. Cope Award to John Hartwig.

John Hartwig is a senior faculty scientist who leads the Catalysis and Chemical Transformations program in the Chemical Sciences Division. At UC Berkeley, he is a professor in the Department of Chemistry and holds the title of Henry Rapoport Chair in Organic Chemistry.

An awards ceremony for the ACS 2021 National Awards recipients will take place on March 23 during the American Chemical Society 2021 Spring National Meeting in San Antonio, Texas.

Visit Elements for the press release

- news

News Archive